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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,396	02/26/2004	Bernard Simon	81091780	4518

28866 7590 11/16/2006

MACMILLAN, SOBANSKI & TODD, LLC  
ONE MARITIME PLAZA - FIFTH FLOOR  
720 WATER STREET  
TOLEDO, OH 43604

EXAMINER

KOEHLER, CHRISTOPHER M

ART UNIT PAPER NUMBER

3726

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/787,396	Applicant(s) SIMON ET AL.	
	Examiner Christopher M. Koehler	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9 and 11-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 8-9 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US Patent No. 3,527,121) in view of Haka (US Patent No. 5,577,976).

#### Claim 1:

Moore teaches a method of producing a gearset, comprising the steps of producing a first member (24, 36) having a first surface (24), and a second surface (36) axially spaced from the first surface, forming a first set of pairs of axially aligned, angularly spaced holes (44, 46) in the first surface and second surface, placing in each of the pairs of holes of the first set (44, 46), a short pinion shaft (58) having a short pinion (54) supported thereon, forming a second set of axial, angularly spaced holes (42) in the first surface (24), placing a long pinion shaft (48) in each hole of the second set (42) and a long pinion (52) on each long pinion shaft, forming a second member (22) having a third set of holes (40), each hole aligned with a hole of the second set (42), placing the second member (22) such that each long pinion shaft (48) fits in a hole of the second set (22) and securing the first (24, 36) and second members (22) mutually.

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Moore does not explicitly teach engaging gear teeth on each long pinion with gear teeth on *two* short pinions located angularly between each long pinion.

Haka teaches a gear set having long pinion gears (22) and short pinion gears (24, 26, 28) having gear teeth that engage each other, wherein the short pinions are located angularly between each long pinion (figure 2).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply the engagement of Haka to the gearset of Moore since Haka teaches that the gear arrangement overcomes the size limitation of the sun gears and ring gears by incorporating additional pinion gears within the planetary arrangement because the additional cost can be minimized by having short axial pinion gears all being the same size with the same number of teeth, the arrangement also increases the number of ratios available (col. 1, lines 29-61).

Claim 9:

Moore teaches a method for producing a gearset, comprising the steps of producing the first member (24) having a first set of axial directed, angularly spaced holes (44), and a second set of axially directed, angularly spaced holes (42), a third set of axially directed, angularly spaced holes (46), each hole of the third set aligned with a hole of the first set (44) and spaced axially therefrom, and an axial pocket (see figure 2, outlines showing pockets) aligned with each hole of the second set (42), placing in the aligned holes of the first set (44) and third set (46), a short pinion shaft (58) having a short pinion (54) supported thereon, placing a long pinion shaft (48) in each hole of the second set (42), inserting axially through each pocket a long pinion (52) onto each long

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pinion shaft (48), forming a second member (22) having a fourth set of holes (40), each hole aligned with a hole of the second set (42), placing the second member (22) such that each long pinion shaft (48) fits in a hole of the fourth set (40), and securing the first (24, 36) and second members (22) mutually.

Moore does not explicitly teach engaging gear teeth on each long pinion with gear teeth on *two* short pinions located angularly between each long pinion.

Haka teaches a gear set having long pinion gears (22) and short pinion gears (24, 26, 28) having gear teeth that engage each other, wherein the short pinions are located angularly between each long pinion (figure 2).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply the engagement of Haka to the gearset of Moore since Haka teaches that the gear arrangement overcomes the size limitation of the sun gears and ring gears by incorporating additional pinion gears within the planetary arrangement because the additional cost can be minimized by having short axial pinion gears all being the same size with the same number of teeth, the arrangement also increases the number of ratios available (col. 1, lines 29-61).

Claims 2-6, 8 and 11-16:

These steps are inherently provided for during the assembly of the gearset of Moore.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-6, 8-9 and 11-16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

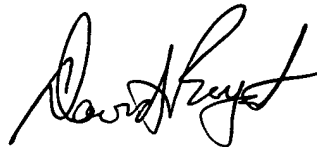
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Koehler whose telephone number is (571) 272-3560. The examiner can normally be reached on Mon.-Fri. 7:30A-4:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMK



DAVID P. BRYANT  
SUPERVISORY PATENT EXAMINER

11/8/06